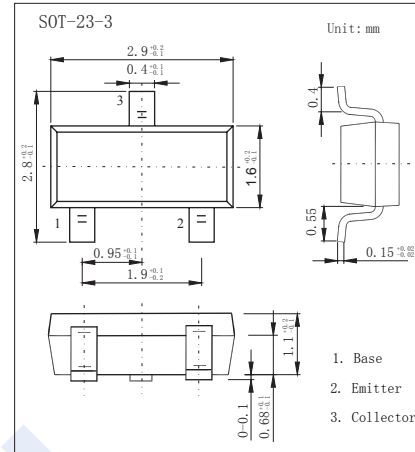


## NPN Transistors

### 2SC4432-HF

#### ■ Features

- High power gain.
- High cutoff frequency.
- Complementary to 2SA1815-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	40	V
Collector - Emitter Voltage	$V_{CE0}$	18	
Emitter - Base Voltage	$V_{EB0}$	3	
Collector Current - Continuous	$I_C$	50	mA
Collector Power Dissipation	$P_C$	250	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	40			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}, I_B = 0$	18			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	3			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 30\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 2\text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			0.2	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 5 \text{ mA}$	60		270	
Power Gain	PG	$V_{CE} = 10\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$		28		dB
Base-to-Collector Time Constant	$\tau_{bb'CC}$	$V_{CE} = 10\text{V}, I_C = 5 \text{ mA}, f = 31.9 \text{ MHz}$			23	ps
Reverse Transfer Capacitance	$C_{re}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		0.45		pF
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		0.7	1.2	
Transition frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$		750		MHz

#### ■ Classification of $h_{FE}$

Type	2SC4432-RT3-HF	2SC4432-RT4-HF	2SC4432-RT5-HF
Range	40-80	60-120	160-320
Marking	RT3 <sub>F</sub>	RT4 <sub>F</sub>	RT5 <sub>F</sub>

## NPN Transistors

### 2SC4432-HF

■ Typical Characteristics

